LISTING OF THE CLAIMS:

Claim 1. (Previously Amended) An optical security element having a substrate layer, wherein a first microstructure for producing a first optically perceptible effect is shaped region-wise into the substrate layer in a surface region of the substrate layer, wherein

the first microstructure is a diffraction structure, in particular a diffraction grating, a diffraction structure for producing a hologram or a matt structure, that the surface region is divided into microscopically fine pattern regions and a background region and the first microstructure is shaped in the pattern regions but not in the background region, that the microscopically fine pattern regions in the surface region are arranged in the form of a moire pattern into which a concealed item of information which can be evaluated by means of an associated verification element is encoded as a security feature, wherein the moire pattern has at least one line grating with a plurality of lines at a line spacing in the range of 40 to 200 μm and the line grating is phase-displaced in region-wise manner to produce the concealed information, and that the microscopically fine pattern regions are further substructured in accordance with a substructuring function which describes a microscopic substructuring, which serves as a further security feature, of the moire pattern and which encodes additional items of information in the surface region.

Claim 2. (Previously Amended) An optical security element according to claim 1, wherein the first microstructure is a first diffraction grating.

Claim 3. (Previously Amended) An optical security element according to claim 1, wherein the first microstructure is a diffraction structure for producing a first hologram.

Claim 4. (Previously Amended) An optical security element according to claim 1, wherein the first microstructure is a first matt structure.

Claim 5. (Previously Amended) An optical security element according to claim 1, wherein a reflecting surface is arranged in the background region.

Claim 6. (Previously Amended) An optical security element according to claim 1, wherein a second microstructure is shaped in the background region, that microstructure being formed by a second diffraction grating which is different from the first diffraction grating.

Claim 7. (Previously Amended) An optical security element according to claim 1, wherein a second microstructure is shaped in the background region, said second microstructure being formed by a diffraction structure for producing a second hologram.

Claim 8. (Previously Amended) An optical security element according to claim 1, wherein a second microstructure is shaped in the background region, said second microstructure being formed by a second matt structure which is different from the first matt structure.

Claim 9. (Previously Amended) An optical security element according to claim 1, wherein the line grating has regions in which the lines of the line grating are curved.

Claim 10. (Previously Amended) An optical security element according to claim 1, wherein the moire pattern comprises two line gratings which are rotated relative to each other through at least 45 degrees.

Claim 11. (Previously Amended) An optical security element according to claim 1, wherein the moire pattern comprises a two-dimensional grating.

Claim 12. (Previously Amended) An optical security element according to claim 1, wherein the average surface coverage of the moire pattern in relation to the resolution capacity of the human eye is constant.

Claim 13. (Previously Amended) An optical security element according to claim 1, wherein the average surface coverage of the substructuring described by the substructuring function in relation to the resolution capacity of the human eye is constant.

Claim 14. (Previously Amended) An optical security element according to claim 1, wherein the average surface coverage of the moire pattern is varied by partially different substructuring.

Claim 15. (Previously Amended) An optical security element according to claim 1, wherein the substructuring function describes a continuous substructuring pattern.

Claim 16. (Previously Amended) An optical security element according to claim 1, wherein the substructuring function describes a non-continuous substructuring pattern.

Claim 17. (Previously Amended) An optical security element according to claim 15, wherein the substructuring function describes a substructuring pattern made up of a plurality of similar individual elements.

Claim 18. (Previously Amended) An optical security element according to claim 17, wherein the spacings of the individual elements and/or their orientation is varied for encoding of a further item of information but the average surface coverage of the substructuring pattern, which can be resolved by the human eye, remains constant.

Claim 19. (Previously Amended) An optical security element according to claim 1, wherein the substructuring function describes a microtext or nanotext which is preferably of a letter height in the range of 20 to 100 μm.

Claim 20. (Previously Amended) An optical security element according to claim 1, wherein a two-dimensional grating is superimposed on the substructuring function.

Claim 21. (Previously Amended) An optical security element according to claim 1, wherein the pattern regions are substructured with an asymmetrical surface profile and that the centroids of the pattern regions are phase-displaced in region-wise manner to produce the concealed information.